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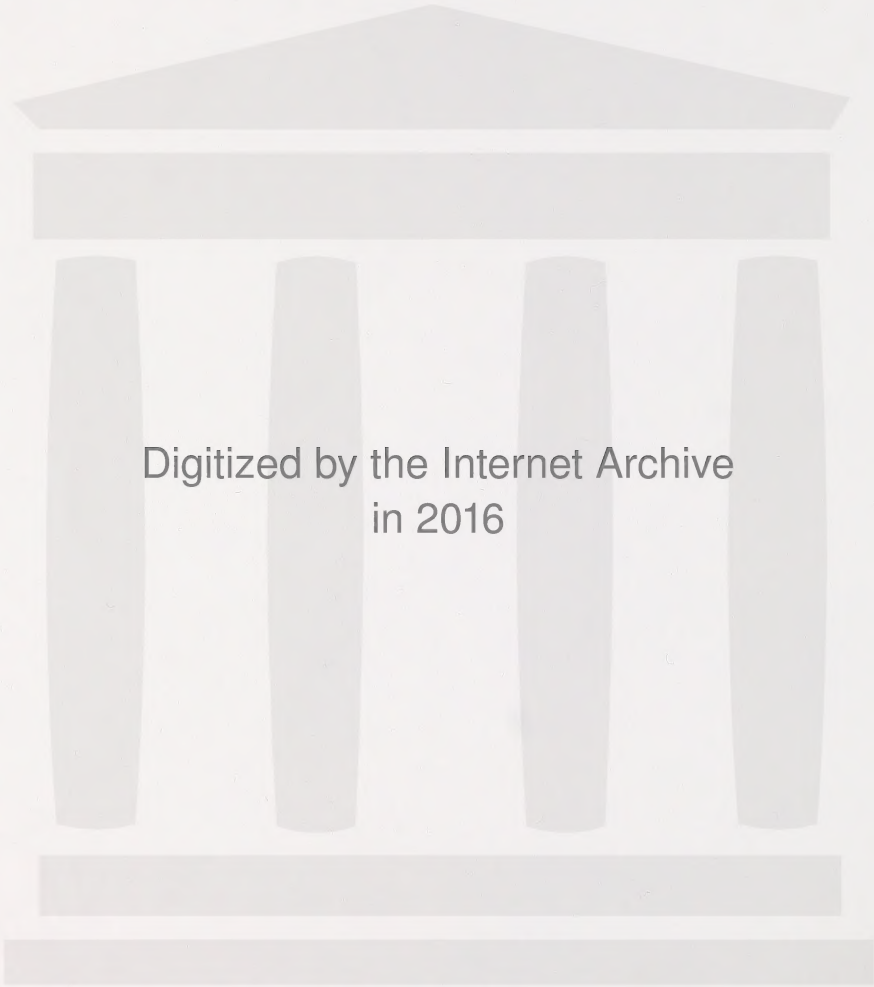
FOR MEDICAL RESEARCH

Health Technology Assessment Unit

REPORT OF ACTIVITIES 1996-1997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Health Technology Assessment Unit

Report of Activities
for
1996 - 1997

Health Technology Assessment- definitions and purpose

Health technologies

are the interventions and applied knowledge used by health care practitioners and systems throughout the entire spectrum of health care: primary prevention, early detection of disease and of risk factors, diagnosis, treatment, rehabilitation and palliative care. Included in health technologies are drugs, devices, medical and surgical procedures, and the organizational, administrative and support systems in which health care is delivered.

(ISTAHC, April 28, 1997)

Health technology assessment (HTA)

is the systematic evaluation of the properties, effects and/or other impacts of health technology. Its primary purpose is to provide objective information to support health care decisions and policy making at the local, regional, national and international levels.

HTA can be a useful resource for decision makers throughout the health system. It provides a framework for bringing together information from evidence-based health care and of making useful judgments when firm evidence is not available and decisions are needed.

Attributes considered during assessment of health technologies may include safety, efficacy (performance under ideal conditions), effectiveness (performance under routine conditions), economic efficiency, social impact, equity and ethical matters. The aim will often be to provide a broad description of a technology, drawing on a variety of data and perspectives.

Health technology assessment can assist decision makers through making available a synthesis of available technical information in the political and administrative context. HTA provides a bridge between the scientific and political domains.

Basis of the program

Alberta's health technology assessment program has been established under the Health Research Collaboration Agreement between the Alberta Heritage Foundation for Medical Research and the Alberta Health Ministry. Under the agreement the Foundation is to establish and maintain a Health Technology Assessment Network within Alberta, and establish links with other relevant organizations in Canada and other countries. HTA functions were formally transferred to the Foundation from Alberta Health in November 1995.

Activities of the present program build on those undertaken by previous health technology assessment services within Alberta Health, under the guidance of the Alberta Technology Assessment Management Committee.

The HTA Unit undertakes assessments in response to requests from organizations and individuals which are related to health technologies likely to be of significance to Alberta. Alberta Health and, increasingly, Regional Health Authorities (RHAs) are expected to be important sources of requests. The Unit may also initiate assessments when it becomes aware of important health technology issues. Suggestions for future assessments are welcome.

In addition to the in-house activities at the Foundation, the HTA program seeks to encourage development of HTA activities by other organisations in the province, through provision of advice and information and through collaborative projects. The program will also take advantage of contacts with HTA agencies in Canada and in other countries, both for exchange of information and collaborative assessments where these appear useful.

Staff at the Unit

The Director of Health Technology Assessment, Dr. David Hailey, joined the Foundation in July. Christa Harstall, Paula Corabian and Francisca Swist had previously been recruited to the Foundation from Alberta Health and worked in the Unit throughout the year. During July/ August Deborah Marshall worked in the Unit before returning to the University of North Carolina. Recruitment was undertaken for a further research associate, who will join the Unit in 1997-98.

Further support for the Unit's activities was provided by the Foundation's librarian, Richard Thornley, the AHFMR Dissemination Program and by Dr. Philip Jacobs, University of Alberta.

Health Technology Assessment Advisory Committee

This committee has been established, as part of the Health Research Collaboration Agreement, to advise the Foundation on the development, support, review, updating, implementation and evaluation of Health Technology Assessment for the Province of Alberta.

The current membership of the Committee is:

Mr. Don Berry, Regional VP of Western Canada - MDS, Ingram & Bell
Dr. Lyall Black, Regional Medical Officer of Health - East Central RHA 7
Ms. Gayle Carriere, Innisfail
Dr. David Hailey, Director, HTA - AHFMR (Chair)
Dr. David Linklater, Senior Team Leader Physician Services - Alberta Health
Dr. Devidas Menon, Executive Director - Canadian Coordinating Office for Health Technology Assessment
Dr. Tom Noseworthy, Professor & Chair, Dept. of Public Health Sciences - University of Alberta
Dr. Lloyd Sutherland, Head, Dept. of Community Health Sciences - University of Calgary
Dr. Bryan Ward, Assistant Registrar - College of Physicians & Surgeons
Dr. Hilary Wynters, Operating Officer, Promotion & Protection - Mistahia Health Region

The committee met for the first time in March 1997.

Contact in Alberta on HTA activities

Presentations on HTA and the Foundation's program were made to a number of groups at Alberta Health, Dept. of Public Health Services, University of Alberta, Council of CEOs, Provincial Health Authorities of Alberta, Technology Research Advisory Committee, the Glenrose Hospital, the Board of the Canadian Coordinating Office for Health Technology Assessment (CCOHTA), and the University of Calgary Department of Community Health Services.

There is increasing interest within the Capital and Calgary RHAs in undertaking locally-based HTA work. Brief discussions were held regarding possible approaches, information exchange and collaborative activities. Advice was also provided to Calgary RHA on trends in health technologies.

Contact was maintained with the College of Physicians and Surgeons, the Alberta Association of Registered Nurses and the Alberta Medical Association. During the year Christa Harstall became a member of the AMA Clinical Practice Guidelines Methodology Resource Group.

The Unit had contact with a number of participants in the Foundation's Swift Efficient Application of Research in Community Health (SEARCH) program, under which health researchers are supported within the RHAs. SEARCH participants have been requested, as part of the course requirement, to conduct a health technology assessment project on issues relevant to their regions. This initiative was launched by a presentation to the SEARCH participants by Christa Harstall.

Information was provided on a number of topics. There was close contact with the pilot project on telepsychiatry undertaken at the Alberta Hospital, Ponoka in association with four regional health authorities. Some input was also provided to a planned telehealth assessment in Region 15, which will be developed as a collaborative project.

Contact was maintained with the Institute for Pharmaco-Economics in Edmonton, and David Hailey served as a member of the Institute's interim Research Advisory Committee.

Contact with other HTA agencies

CCOHTA in Ottawa continued to give most useful support through assistance with literature searches and provision of information. Dr Hailey was appointed as a member of CCOHTA's Scientific Advisory Panel during the year and attended two meetings of that body.

A number of agencies in Canada undertake health technology assessment. In 1994 an initiative by CCOHTA established a HTA network as a framework for improving liaison between these agencies.

The AHFMR hosted the most recent meeting of the network in November. The meeting was attended by representatives from CCOHTA, the British Columbia Office of Health Technology Assessment, Conseil d'évaluation des technologies de la Santé du Québec, Institute for Clinical Evaluative Sciences, Toronto, Saskatchewan Health, Health Services Utilization and Research Commission, Saskatchewan, and the Department of Health and Social Services, North West Territories.

Major topics for discussion were dissemination of HTA and the use of current information technology to provide better linkages between the Canadian agencies. Subsequently, an e-mail based discussion board was put in place by CCOHTA and is proving useful for exchange of information.

Christa Harstall attended a National Workshop on Research Transfer Issues, Methods and Experiences which was cosponsored by the Institute for Clinical Evaluative Sciences. Participants were asked to address dissemination issues specific to health services and policy research.

As part of its progress towards developing wider links, the Foundation has become a member of the International Network of Agencies for Health Technology Assessment (INAHTA). The Network currently includes 22 agencies in 12 countries. This should improve access to data and advice on health technology assessment issues. There was frequent contact throughout the year with INAHTA members and with other HTA agencies outside Canada.

Work program

While a number of new projects were started, much of the activity in the Unit during the year was related to work which had been in progress prior to the transfer of functions to the AHFMR. Several of these earlier matters were brought to completion.

In addition, some thought was given to the type of HTA products that would be produced by the Unit. Three types of HTA publications have been established:

Tech-Notes: These are reports which typically involve a limited search of the relevant literature and no in-depth analysis. They are intended to provide short-term advice in response to urgent requests related to policy or administrative decisions. These publications are not externally reviewed. The Tech-notes are similar to the short reports of this type that were developed under the program at Alberta Health.

Health Technology Briefs: The Tech notes may sometimes be the starting point for more extensive assessments of health technologies as further data become available. As a first stage, consideration may be given to preparing a health technology brief - a short publication intended to draw together the main issues on a health care technology for the information of policy-makers, health care professionals and others.

This approach has been used by several HTA agencies and has often proved valuable in providing preliminary advice about new health care technologies. Health technology briefs are subject to a review procedure, typically involving persons with interest or expertise in the field being considered.

Health Technology Assessments: Health technology assessments will be more detailed publications, often entailing more comprehensive literature and data review and levels of analysis. Typically there will be a synthesis of information obtained from the literature, reference to relevant provincial statistics and often a cost or economic analysis.

While much of the work of the Unit will be concerned with secondary assessment - synthesizing the information from published work - there will also be contact from time to time with primary data projects in the province. These are likely to provide the basis for assessment reports.

Brief details of assessments:

- The report on alternative interventions gave the results of a survey undertaken, while the HTA program was in Alberta Health, because of continuing interest in these approaches. It identified the most commonly requested alternative interventions in Canada and coverage for these in various jurisdictions.

- One of the topics selected for assessment by the former Alberta Technology Assessment Management Committee (ATAMC) was the use of pressure measurement systems, developed to assist in the management of pressure sores. An earlier approach to this topic had not been completed. The report produced by the Unit followed on from this previous work, with a view to possible future assessment activities in this important area.

  The limited available data suggest that information provided by different types of measurement systems are not directly comparable, and no data could be found on their efficacy in contributing to the avoidance of pressure sores. Further research to define the performance and role of this technology would be desirable. Further work to identify the extent of the problem and options to reduce pressure sore morbidity in Alberta should be considered.

- The report on pallidotomy (PVP) for Parkinson's Disease followed earlier interest within Alberta Health and came at a time when the procedure was about to be introduced into the province.

  The report concluded that the procedure should be regarded as an evolving technology, with uncertain outcomes, until further data become available; be performed only in specialized centres which have combined neurological and neurosurgical expertise; and that systematic collection of data on PVP cases in the province should be obtained, and include results of long-term follow-up.

- A review of *in vitro* fertilization and embryo transfer (IVF-ET) covered reports on the safety and efficacy of this type of assisted reproduction technology that had been published since the Royal Commission Report. The ATAMC had expressed interest in an initial report on this topic and had suggested that follow-up work would be desirable.

  The report concluded that those offering or considering the use of IVF-ET should be aware that the technology has been shown to be effective only for severe bilateral tubal disease, that for other infertility diagnoses the present evidence does not establish whether IVF-ET is effective or not; and that obstetric and pediatric complications following IVF-ET may be significant

- The first health technology brief, on ultrasound measurement of post-void residual urine volume in individuals with stroke or spinal injury, was a follow-up to an earlier Tech-Note. The work was undertaken at the request of the Capital Health Authority, and the advice proved helpful in informing decisions on procurement of this technology.

  It was found that this method is less accurate than intermittent catheterization but appears acceptable for measurement of PVR urine volume in the context of bladder retraining programs. Institutions using the technology should have in place suitable training procedures and validate the accuracy of the method.

- Following decisions taken at the INAHTA annual meeting in June, AHFMR was given responsibility for finalizing a project on bone density measurement and related treatments for prevention of fractures. The statement of findings was extensively revised, and two of the three background papers were updated and completed. The reports were accepted by INAHTA and have now been widely disseminated in a number of countries by members of the Network.

  The study concluded there is fair evidence that BDM can predict the risk of fractures, but not with high accuracy; good evidence to support the efficacy of hormone replacement therapy and salmon calcitonin in preserving bone mass during treatment; and fair evidence that these therapies are efficacious in preventing fractures. However, when this evidence is used to evaluate the potential effectiveness of BDM screening of menopausal women in

combination with these therapies it was estimated that only 1-7% of hip fractures might be prevented.

News and dissemination of HTA findings

Newsletter: The Unit has continued to publish a newsletter, Tech-Wise, which was one of the initiatives put in place while the program was at Alberta Health.

Details of the HTA program, including available publications and work in progress, are now included on the Foundation's website. Such information is also provided routinely to International Network of Agencies for Health Technology Assessment (INAHTA) for inclusion on the network's database.

The AHFMR Dissemination program provided useful assistance with three HTA reports through preparation of summaries intended for more general audiences, and identification and mail-out to persons and organizations with potential interest in the topics covered.

Fourteen Tech-Notes were issued during the year, on a wide variety of topics (Appendix I). Urgent advice was provided on two other technologies, ultrasound measurement of post-void residual urine volume (see above) and ethanol injection treatment for hepatic carcinoma, and was followed-up by development of Health Technology Briefs.

Information requests: The Unit was contacted by a number of persons seeking information on a wide variety of topics. The level of response varied considerably.

The HTA program within Alberta Health began collecting a variety of documents from various Canadian and international sources to assist in responding to HTA requests. This inventory of holdings is being catalogued to allow provincial access to the Reference Centre.

Work in progress

At the end of April the following projects were in progress

Topic	Request from
Aspirin prophylaxis for MI, stroke, colon cancer	Alberta Health
Approaches to telehealth assessment	In house
Percutaneous ethanol injection therapy	Alberta Health
Telehealth economic study	Keeweetinok Lakes
Balance dysfunction and support balance re-education	Glenrose Rehabilitation Hospital.
Radiotherapy services - cost study	Tom Baker Cancer Centre
Definition of experimental technology - Delphi study	In house
Gait analysis in management of cerebral palsy	Glenrose Rehabilitation Hospital
Diagnostic methods in vaginitis	Alberta Medical Association CPG
Bisphosphonates in management of osteoporosis	Collaboration in CCOHTA project

Publications and presentations, 1996-97

Health Technology Assessments:

- Paula Corabian. *In vitro fertilization and embryo transfer as a treatment for infertility*, March 1997
- Christa Harstall & David Hailey. *Posteroventral pallidotomy in Parkinson's disease*, January 1997.
- Christa Harstall. *Interface pressure measurement systems for management of pressure sores*, September 1996
- *Alternative interventions survey,* May 1996

Reports published on behalf of the International Network of Agencies for Health Technology Assessment.

INAHTA project on the effectiveness of bone density measurement and associated treatments for prevention of fractures:

- David Hailey, Laura Sampietro-Colom , Deborah Marshall , Rosa Rico, Alicia Granados, José Asua , and Trevor Sheldon. *Statement of findings.* September 1996 (plus summary document).
- David Hailey. *Background paper one. Methods used in the measurement of bone density.* July 1996
- Deborah Marshall and Trevor Sheldon. *Background paper two. Predictive value of bone densitometry.* July 1996
- Laura Sampietro-Colom, Rosa Rico, Alicia Granados, and José Asua. *Background paper three. A review of the evidence of hormone replacement therapy and calcitonin in reducing bone loss and fractures.* September 1996

Health Technology Brief:

- Paula Corabian. *Ultrasound measurement of post-void residual urine volume*, August 1996.

Health Tech Notes

- Graduated compression stockings to prevent and treat venous insufficiency. April 1997
- Radiosurgery in the treatment of malignant melanoma. February 1997
- Vaginoplasty and criteria for M-F sex reassignment surgery. February 1997
- Stem cell transplantation, January 1997
- Phalloplasty, December 1996
- Scanning laser ophthalmoscope for diagnosis and monitoring of glaucoma, December 1996

- Intrathecal Baclofen using an implantable infusion pump, November 1996
- Cord blood transplantation, November 1996
- Availability of thrombolytic therapy in the emergency room, October 1996
- The use of electrical stimulation to promote healing of fractures, October 1996
- Gamma knife vs. linear accelerator for acoustic neuroma, July 1996
- Hyperbaric oxygen therapy for Multiple Sclerosis, July 1996
- Intravenous immunoglobulin for recurrent pregnancy loss, May 1996
- Chemoembolization for uterine leiomyosarcoma, May 1996

External presentations and publications

- C. Harstall - '*Research tools' of HTA*. SEARCH residential course, Lethbridge, May 1996.
- C. Harstall, F. Fung - *Laser uvulopalatoplasty as a treatment for obstructive sleep apnea and snoring* (poster), Annual Meeting of the International Society of Technology Assessment in Health Care, San Francisco, June 1996.
- C Harstall. *Why HTA is an important and useful service for management.* Joint Management Divisional Council at the Glenrose Rehabilitation Hospital, December 1996.
- D Hailey, D Marshall. Imaging struggles to predict bone fractures.

  Diagnostic Imaging Europe, 1997;13: 26-29, 48
- D Hailey. *The effectiveness of bone density measurement and associated treatments for prevention of fractures -An international health technology assessment.* Canadian Multicentre Osteoporosis Study, Scientific Meeting, Château Vaudreuil, Québec, April 1996
- D Hailey *Trends in health care technologies*, Strategic Directions Committee, Calgary RHA, Calgary, April 1996.

Newsletter

- Tech-Wise - Issue No. 8, August 1996
- No. 9, March 1997

Referees / commentators

The following persons acted as referees or provided comments during preparation of the AHFMR reports completed in 1996-97.

Dr. José Asua, Basque Office for Health Technology Assessment, Vitoria-Gasteiz, Spain.
Ms. Susan Calne, Neurogenerative Disorders Centre, Vancouver Hospital, Vancouver.
Mary Cardi, Center for Rehabilitation Technology, Helen Hayes Hospital, New York, US.
Dr. K. J. Collier, Manitoba Health, Winnipeg.
Dr. D. Cow, Health Insurance and Related Programs, Ministry of Health, Kingston, Ontario.
Professor S. Daya, Department of Obstetrics and Gynecology, McMaster University, Hamilton, Ontario.
Mr. Frank Fung, Alberta Health, Edmonton.
Dr Elina Hemminki, National Research and Development Centre for Welfare & Health, Helsinki, Finland.
Dr. Ron Hennig, Edmonton
Dr. Geoffrey Hirst, Melbourne, Australia.
Dr. Anthony E. Lang, Movement Disorders Clinic, The Toronto Hospital, Toronto.
Dr. J. Jarrell, Calgary Regional Health Authority
Dr. M. van Leeuwen, Health Council of the Netherlands, Rijswijk.
Dr. W.R. Wayne Martin, Movement Disorder Clinic, Glenrose Rehabilitation Hospital, Edmonton.
Professor D. G. Moores, Faculty of Medicine, University of Alberta, Edmonton,
Mr Dean Olmstead, Capital Health Authority, University of Alberta Hospital.
Dr. M. Y. Pelletier, Régie de l'assurance-maladie du Québec, Montreal.
Mr. Glen Robert, Wessex Institute for Health Research and Development, Winchester, UK.
Ms Susan Slaughter, Northern Alberta Regional Geriatric Program.
Mr. L. Svenson, Alberta Health, Edmonton
Dr. N. B. Urie, Department of Health and Community Services, Fredericton, New Brunswick.
Professor C. Wood, Ashburton, Victoria, Australia

Information on the HTA Program

Information on the HTA program is available on the Foundation's website at http://www.sas.ab.ca

Further details on the program and current activities can be obtained from:

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The inventory of holdings is listed at http://gate.library.ualberta.ca/

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